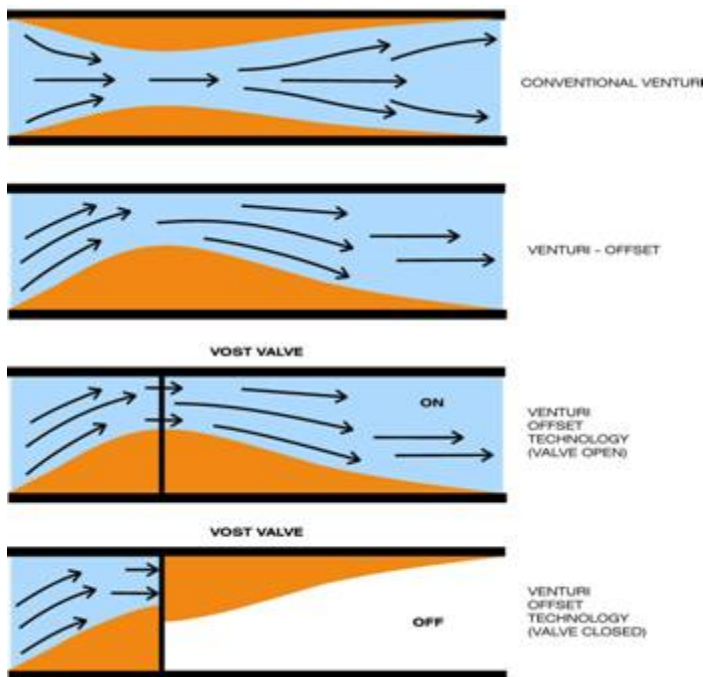


## BIG HORN VALVE, INC.

Big Horn Valve, Inc. was founded in Sheridan on June 11, 1997 by Kevin Burgess to develop a new stemless valve technology called the VOST™ valve. This basic new valve technology was incubated as a result of practical “field” lessons learned during installation, repair, and maintenance of residential irrigation systems. Kevin’s technical base came from nine years as Physical Plant Director at Sheridan College; five years as a maintenance planner with Exxon Minerals; and two years of studies at the Colorado School of Mines.



Senator Mike Enzi (at right)  
with Kevin Burgess, founder  
and president of BHVI



### BASIC CONCEPT

As with the development of all new ideas, the VOST™ technology has seen many changes since its inception. A visit in 1997 with Dave Walrath and Bill Lindberg of the Mechanical Engineering Department at the University of Wyoming resulted in the formation of the basic valve concept (see pictures at left) that embodies an eccentric venturi to accomplish what other valves do with a stem and handle—turning fluid flow on and off.

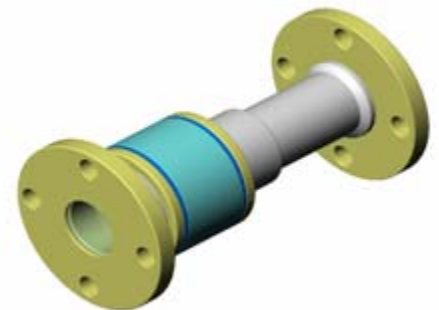
The concept of a stemless valve is a new platform technology that can solve a number of different problems for

industry. For example, more stringent air quality standards require the petroleum and petrochemical industries to reduce emissions from valves.

Patent No.'s. 5,718,257, 6,026,845, 6,109,293  
Other U.S. and International Patents Pending

### PRODUCT DEVELOPMENT

The principal source of valve emissions in standard valves is the dynamic (moving) seal around the actuator stem. Big Horn Valve has recently developed a VOST™ valve that uses magnets to rotate the valve into the open and closed positions. This eliminates the need for a penetration through the body of the valve and as a result there is no way the valve can leak to the outside if it is installed properly. Notice the lack of a valve stem on the drawing of the magnetic valve (at right).



Outside view of VOST™  
magnetically actuated valve



## TESTING

Field tests have been conducted on the manual valve at the Rocky Mountain Oilfield Testing Center north of Casper. The automated valve was tested at Torque Process and Control, a Casper firm specializing in refinery support services.

A full-scale test of 2" manual valves is planned for the spring of 2005, at Chevron-Phillips' petrochemical plant near Amarillo,

TX. Upon successful completion of the Chevron-Phillips test, a follow-up test will be conducted at a refinery operated by Chevron-Texaco near Los Angeles, CA.

## MARKETING

Big Horn Valve management sees greatest potential in the short run, for direct product sales to motivated customers—particularly those that have participated in product development with them.

In late 2004, Big Horn Valve established a joint venture partnership with MIC Group in Brenham Texas. MIC possesses a full range of manufacturing capabilities, including foundry, machine shop and valve testing facilities. The company manufactures an array of products, including specialty valves for the petroleum industry. This partnership will also enable BHVI, with its one full time and three part time employees, to respond to larger orders without investing heavily in plant and equipment.

Management and engineering activities will continue to expand at the company headquarters in Sheridan, WY. Continued success in raising capital for manufacturing as well as recent SBIR awards will allow the company to meet its goals in 2005.

For more information contact Big Horn Valve at:

[http://www.bighornvalve.com/v2/big\\_home.html](http://www.bighornvalve.com/v2/big_home.html)

Kevin Burgess--Email: [info@bighornvalve.com](mailto:info@bighornvalve.com)

Phone: 307-672-0968

FAX: 307-672-5386

Address: BigHornValve - 248 West Works Street

P.O. Box 6849, Sheridan, WY 82801



INTRODUCING VENTURI OFFSET TECHNOLOGY (VOST)